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1/13/93UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: JAN 13 1993

SUBJECT: Review of Work Plan for a Field Investigation at the
Selmer Company in Elkhart, IndianaFROM: Doug Yeskis, Geologist
Technical Support Section*Doug Yeskis*TO: Ken Theisen, OSC
Emergency Response Section 3

At the request of Liz Murphy of the ORC, I have reviewed the above document and provided verbal comments to you today. This memo is to provide the documentation for these comments. The objective of this review was to address whether the work proposed would address the possibility of contaminants in the groundwater at this site. I will provide a discussion to address this issue and then provide some general comments based on my review of this document.

Ground-Water Contamination

Based on the geologic description provided on page 2 of the report (section 1.1.2), the groundwater is found very shallow and the upper aquifer (composed of an outwash deposit) is not extremely thick (approximately 40 feet thick). I realize that another study in the area may conflict with the anticipated aquifer thickness based on our discussion. However, given the information provided, as well as the potential dumping practices (TCE contaminated sludges and small quantities of pure TCE), I believe that a small refinement of their work plan is recommended. Specifically, because of the shallow depth to groundwater and the potential of pure TCE liquid being dumped, the occurrence of a DNAPL and/or deep contamination may be present. Also, since dumping ceased some time ago, the possibility of the lack of contamination near the water table may exist with the contaminants being flushed deeper. The aquifer materials would not be expected to retard contaminant movement readily. The presence of the pond, with the recharge by the plant, may provide sufficient head to drive the contaminants deeper.

Therefore, I recommend a minimum of two wells drilled deeper at downgradient locations (possibly at the SB-1 and SB-3 locations). These boreholes should be drilled to the top of the confining layer discussed on page 2, or to some maximum drilling depth (such as 50 or 60 feet). The wells should have 5-foot screens and should be placed on the top of the confining unit (or the first significant silt/clay layer). If no clay layer is reached by the 50 to 60 foot mark, a natural gamma tool as we discussed, could be helpful in siting the well. In addition, the water table wells should have the screen lengths increased to 10 feet in length and should be placed to straddle the water table (approximately 2 to 4 feet above

the water table with the rest below the water table). This will allow for fluctuations of the water table within the screened interval.

Additional comments

1) The proposed soil sampling procedure has been shown to be one of the least effective methods of collecting samples for VOC analyses. A simple adaption that the PRP's could use is the method discussed by you and I using split-spoon liners. I have attached an issue paper that discusses soil sampling procedures for VOC's for your information. Other methods are also recommended but would incur additional costs.

2) The PRP's were proposing the use of galvanized steel riser pipe for their wells. I suggest against the use of galvanized pipe based on the chemical reactions that may occur. PVC riser pipe may be an acceptable alternative for this site.

3) The ground-water sampling program as proposed by the PRP's have several points which should be revised. The first concerns their use of temporary well points for this work. I would recommend that these wells be installed as a more permanent feature for several reasons. These are:

a) The PRP's allow insufficient time between well development and well sampling for the well to recover from the well drilling and development "trauma". At least one well should be allowed between the cessation of well development and the beginning of well sampling.

b) The placement of temporary wells that would be pulled following sampling could result in extra costs to the PRP's if the analytical results require additional sampling, or if the analytical data is incomplete (i.e. samples lost, QA/QC criteria not met, etc.).

The other issue with the ground-water sampling program that should be addressed is the use of bailers for the sampling program. Much of the recent literature (available at your request) has shown the bias by bailers on VOC's and therefore, another sampling device is recommended, such as positive displacement pumps capable of low flow pumping (200-400 ml/min pumping rates). I can provide a list of possible devices at your request.

4) No mention is made of determining ground-water flow directions. At least one round of water levels should be collected to determine the flow directions during the sampling effort. This would be needed to insure that the wells were properly situated to intercept the source areas at the time of the sampling. The water levels are taken prior to sampling already, so no additional costs would be incurred. The wells and water levels should be surveyed to ± 0.01

foot accuracy (which is easily obtainable).

I hope these comments have been of some assistance to you. If you have any questions, please feel free to call me. I have also enclosed a Critique Sheet and a addressed envelope to Steve Ostrodka. Please fill this out so that we may strive to improve our service to you in the future.

Attachment

cc: Liz Murphy, CS-3T
Steve Ostrodka, TSS (w/out attachment)